Environmental Restoration News

U.S. Army Alaska — Fort Richardson

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RAB Update

On July 19, 2001, Mark Prieksat, the Army's Restoration Advisory Board (RAB) Co-chair, hosted a tour for RAB members and the general public of Eagle River Flats on Fort Richardson. Eagle River Flats is also known as Operable Unit C. Before a group of about 15 people, Bill Gossweiler, the Army's Project Manager for Eagle River Flats, presented information regarding site history, the cleanup work conducted to date, and the success of these cleanup measures. Sherry Butters of Clearwater Environmental gave a demonstration showing how paths and work areas within Eagle River Flats are canvassed for military ordnance. She also showed some examples of ordnance that had been found at the Eagle River Flats site. An update on Eagle River Flats is included in this newsletter on pages 3 and 4.

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DOD Relative Risk Site Evaluation Concept

Relative risk site evaluation is a methodology used by Department of Defense (DoD) to evaluate the relative risk posed by a site. The relative risk site evaluation framework is a qualitative methodology, as opposed to a comprehensive risk assessment in which baseline human health or ecological risks are assessed. The relative risk grouping used by DoD segregates sites into high, medium, and low categories based on an evaluation of site information. Relative risk evaluation is not a substitute for either a baseline risk assessment or health assessment, however, it can be used by DoD as an important tool in determining, communicating, and establishing priorities for environmental restoration work. The relative risk concept also provides DoD with a basis for establishing goals and performance measures for the environmental restoration program. A representation of this evaluation concept is presented in Figure 1.

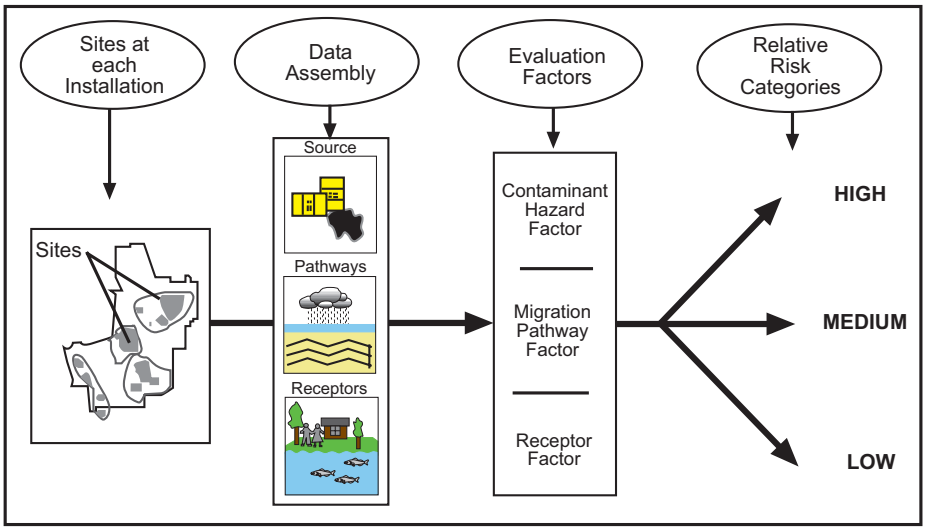

Figure 1. Relative Risk Evaluation Concept

The actual funding priority for a site is identified after relative risk information is combined with other important risk management considerations (e.g., the statutory and regulatory status of a particular installation or site, public stakeholder concerns, program execution considerations, and economic factors). These additional risk management considerations can result in a decision to fund work at a site that is not classified as a high relative risk.

Acronyms

RAB
Restoration Advisory Board

DoD
Department of Defense

DOD Relative Risk Site Evaluation Concept (Cont'd from Page 1)

DoD has established goals for all DoD Components to reduce relative risk at sites in Defense Environmental Restoration Account (DERA) and Base Realignment and Closure (BRAC) programs or to have remedial systems in place where necessary for these sites, within the context of legal agreements. For more information on relative risk and other DoD environmental programs go to: **http://www.dtic.mil/envirodod/relrisk/relrisk.html**

Two-Party Agreement Sites

Building 762, Former GSA Fueling Station, Underground Storage Tank Site

Acronyms

DERA
Defense Environmental Restoration Account

BRAC
Base Realignment and Closure

GRO
Gasoline range organics

DRO
Diesel range organics

TCE
Trichloroethylene

CRREL
Cold Regions Research and Engineering Laboratory

SVE
Soil Vapor Extraction

Five additional groundwater wells were installed at the site as a result of contamination found in the cross gradient well near Building 786. Benzene, gasoline range organics (GRO), diesel range organics (DRO), trichloroethylene (TCE), and acetone were detected in groundwater and soil sampled at the site. Additional wells will be installed after U.S. Army Cold Regions Research and Engineering Laboratory (CRREL) completes a geophysical survey to detect subsurface anomalies, such as a dry well, septic system, or underground storage tank, that might be the source of contamination at the site.

Building 986, POL Laboratory Dry Well (a former OUA Site)

The Soil Vapor Extraction (SVE) system that was previously installed at the site is being operated and will be monitored for another year. Investigation of the associated soil piles located in Circle Loop has been completed. The results indicate that surface and subsurface contamination is limited. The two remaining soil stockpiles will be removed and thermally treated. The soil under the stockpiles will be sampled to ensure that the integrity of the liners was maintained during soil storage.

Building 987, Former Pump House and Aboveground Storage Tanks

The interim site investigation has been completed and the sampling report is being distributed for review and comment. Preliminary review of the report indicates that petroleum contaminated areas remain at the site. In addition, two previously undetected release sites appear to have been discovered during the investigation. The next course of action has not been determined for this site, but the Army will likely develop a scope of work for additional investigation/remediation.

Building 28008, Water Treatment Plant, Underground Storage Tank Site

A limited Feasibility Study has been completed and the Army is developing a Remedial Work Plan for this site. The work plan will present potential remedial designs for an SVE/Air Sparge system to treat contaminated soil and groundwater at the site.

Two-Party Agreement Sites (Cont'd from Page 2)

Building 35610/35620, Pump House, Underground Storage Tank Sites

The Army conducted a substantial soil removal and treatment operation at these sites in 1999. The Army is currently monitoring groundwater to assess if the soil removal operation successfully eliminated the source areas.

Building 47220, Former Boat House, Underground Storage Tank Site

The release investigation has been completed at this site. The Army is conducting a leachability assessment to determine the potential for contaminants to migrate to groundwater. Groundwater contamination was not detected at this site during the release investigation, but petroleum contamination remains in the soil at the site.

Building 59000, Small Arms Range, Underground Storage Tank Site

A work plan is being developed to drill additional soil borings and install additional groundwater monitoring wells at this site. Free-phase petroleum has consistently been detected in one groundwater monitoring well at this site. Geology at the site is complex and the absence of measurable groundwater has made the determination of groundwater gradient and direction difficult. A passive petroleum recovery system will also be installed in wells at the site in a effort to capture and remove free-phase petroleum from groundwater.

Operable Unit Updates

OUB
Poleline Road Disposal Area

The fall groundwater monitoring has been completed at the Poleline Road Disposal Area. The groundwater sampling data is being used by CRREL to develop a 3-dimensional model of the geology and contamination at the site. The model will be used as a tool to help decide future clean up actions at the site.

OUC
Eagle River Flats

All six pumping systems performed well over the course of the season. Pumps were installed in Ponds 146, 183, and 155 in Area C, Ponds 75 and 730 in Area C/D, and Pond 226 in Area A. Pond 226 in Area A was drained and dry by the end of June, allowing some remediation to occur. Pond 75 also dried well with some remediation occurring. This was the first year these ponds were treated. The drainage ditch blasted through C-marsh to Pond 171 in June also performed well, allowing the pump in Pond 146 to treat a larger area that was previously wet throughout the summer season. Pond 285, a small highly contaminated pond on Racine Island was drained using a small blasted drainage ditch.

The construction of the tide gate in the Bread Truck Pond (109) ditch was postponed until 2002 due to unseasonably warm weather at the end of March. The web camera set up to monitor the erosion progression of the ditch showed significant advancement of the ditch headwall. The current plan is to attempt to block the ditch in early March of 2002. The blockage should improve the drying of the ponded areas currently influenced by the lower flooding threshold of the Bread Truck ditch.

Operable Unit Updates (Cont'd from Page 3)

CH-47D Chinook helicopter airlifting pump into Eagle River Flats

Acronym

WP
White phosphorous

Ten dataloggers were deployed in Pond 183 (2), 155 (2), 730 (1), Bread Truck (2), 75 (1), 146 (1), and 226 (1) to monitor remediation conditions within the ponds being treated. Sensors deployed with the dataloggers measured sediment moisture and sediment temperature at several levels within the soil, soil/water tension, and surface water depth. Additionally, manufactured white phosphorous (WP) particles of a known mass were planted at the beginning of the season and recovered at the end of the season at the datalogger locations as another method of measuring rate of WP remediation. The meteorological station located adjacent to the OB/OD pad is once again on line. This station measures air temperature, wind speed and direction, and provides precipitation data.

Over a hundred sediment samples were collected in May and August of this year. The majority of these were composite samples, each consisting of up to 48 discrete samples collected on a 1.82-meter grid pattern. Samples were collected in treated ponds, as well as additional ponds in Area A and the pond-marsh complex in Area C west of Pond 155. This area has not been previously sampled and is heavily used by waterfowl. These samples have been analyzed and complete results will be available later this fall. Some actions based on the results in May (drainage of a wet area adjacent to Pond 155) were implemented in June.

The web cameras and meteorlogical station were in place during the course of the summer season. Reliability and image quality should increase next season, with the complete elimination of access line costs. The imagery will again be available on a daily basis on the Eagle River Flats public web site **www.crrel.usace.army.mil/erf**.

Operable Unit Updates (Cont'd from Page 4)

View of Eagle River Flats

OUE

The Army has completed pre-remedial investigation soil sampling and groundwater well installation at one of the OUE sites, the Armored Vehicle Wash Area (AVMA). The result of the soil sampling was inconclusive, but further investigation is planned. The draft Management Plan for the Remedial Investigation and Feasibility Study (RI/FS) has been prepared and is being distributed for review and comment by the remedial project managers for the Army, Alaska Department of Environmental Conservation (ADEC), and U.S. Environmental Protection Agency (USEPA). The Management Plan presents the approach and methodologies that will be used to conduct the remedial investigation for OUE.

A groundwater sampling program has been implemented for the OUE sites and the first sampling event was conducted during September 2001. In addition, CRREL has conducted some additional geophysical investigation at the AVMA site which will help determine sampling locations during the remedial investigation.

Acronyms

AVMA
Army Vehicle Maintenance Area

RI/FS
Remedial Investigation/ Feasibility Study

USEPA
U.S. Environmental Protection Agency

ADEC
Alaska Department of Environmental Conservation

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